



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/686,138

10/15/2003

Brian J. Brown

03-167US (202.0080001)

6236

54953

7590

08/06/2008

BROOKS, CAMERON & HUEBSCH, PLLC
1221 NICOLLET AVENUE
SUITE 500
MINNEAPOLIS, MN 55403

EXAMINER

TYSON, MELANIE RUANO

ART UNIT

PAPER NUMBER

3773

MAIL DATE

DELIVERY MODE

08/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/686,138	Applicant(s) BROWN ET AL.	
	Examiner Melanie Tyson	Art Unit 3773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12-19 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) 23 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-19, and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendment received on 13 May 2008. Claims 10, 11, 20, and 21 are cancelled. Claims 23 and 24 remain withdrawn from consideration.

Response to Arguments

2. Applicant's arguments filed 13 May 2008 with respect to the Melzer et al. reference have been fully considered and are persuasive. The previous rejection of claims 1-9, 12-19, and 22 has been withdrawn and a new rejection has been set forth below.

Claim Objections

3. Claims 8 and 18 are objected to because of the following informalities: claims 8 and 18 recite incomplete sentences. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4, 5-8, 13, 14, and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Keilman et al. (6,231,516 B1). Keilman discloses a stent (see entire document) comprising a structure substantially invisible under MRI visualization (Nitinol material possesses poor MRI visualization properties, thus is considered to be **substantially** invisible) having multiple cells facing opposite directions (thus having

Art Unit: 3773

orthogonal axes generally perpendicular to each other) and connectors (146) interconnecting the cells, and an RF marker (121) in that the generally concentric loops on only one side form a conductive path (the outside surface, or the peripheral surface that delineates a circumference of the cells; for example, see Fig. 11B).

6. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Solovay (6,482,227 B1). Solovay discloses a stent (see entire document) comprising a structure substantially invisible under MRI visualization (Nitinol material possesses poor MRI visualization properties, thus is considered to be **substantially** invisible) having first and second cells facing opposite directions (thus having orthogonal axes generally perpendicular to each other), and an RF marker (15) that forms generally concentric loops on only one side (on the right side) of each of the first and second cells (for example, see Fig. 1).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 3, 9, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keilman et al. Keilman discloses the claimed invention except for ceramic struts, polymer connectors, and that the RF marker is embedded in the stent.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the struts of ceramic material and the connectors of polymer material, since it has been held to be within the general skill of a worker to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to embed the RF marker in the stent structure since the applicant has not disclosed that embedding the marker provides an advantage, is used for a particular purpose, or solves a stated problem and it appears the prior art marker would perform equally well.

10. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solovay. Solovay discloses the claimed invention except for an RF marker on a fourth cell. (Solovay discloses an RF marker on three cells).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the stent with a fourth marker as claimed, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to embed the RF marker in the stent structure since the applicant has not disclosed that embedding the marker provides an advantage, is used for a particular purpose, or solves a stated problem and it appears the prior art marker would perform equally well.

11. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solovay in view of Doran et al. (2002/0055770 A1).

Solovay discloses the claimed invention except for ceramic struts and polymer connectors. Doran discloses a stent (see entire document) comprising cells. Doran teaches the cells are interconnected by connectors in order to increase flexibility of the stent (for example, see paragraph 83). It is well within the general knowledge of one having ordinary skill in the art to apply a known technique to a known device ready for improvement to yield predictable results. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct Solovay's stent with connectors as taught by Doran. Doing so would provide a more flexible stent body. Furthermore, Doran teaches the stent and connectors may be made from materials such as ceramics, polymers, and combinations thereof (for example, see paragraph 187). It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the struts of ceramic material and the connectors of a polymer material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice.

12. Claims 12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keilman et al. in view of Jackson et al. Keilman discloses the claimed invention except for a magnetic susceptibility marker. Jackson discloses a tubular structure (see entire document). Jackson teaches connecting magnetic susceptibility markers (such as paramagnetic materials; paragraph 16) that are visible under MRI to the tubular structure. It is well within the general knowledge of one having ordinary skill in the art to apply a known technique to a known device ready for improvement to yield predictable results. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct Keilman's stent with a magnetic susceptibility marker as taught by Jackson. Doing so would further enable a user to clearly recognize the position of the stent under MRI (for example, see paragraph 16), thus facilitating proper implantation.

13. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Solovay in view of Jackson et al. Solovay discloses the claimed invention except for a magnetic susceptibility marker. Jackson discloses a tubular structure (see entire document). Jackson teaches connecting magnetic susceptibility markers (such as paramagnetic materials; paragraph 16) that are visible under MRI to the tubular structure. It is well within the general knowledge of one having ordinary skill in the art to apply a known technique to a known device ready for improvement to yield predictable results. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct Solovay's stent with a magnetic susceptibility marker as taught by Jackson. Doing so would further enable a user to clearly recognize the

position of the stent under MRI (for example, see paragraph 16), thus facilitating proper implantation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Tyson whose telephone number is (571)272-9062. The examiner can normally be reached on Monday through Thursday 8:30-7 (max flex).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jackie Ho can be reached on (571) 272-4696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Melanie Tyson /M. T./
Examiner, Art Unit 3773
July 31, 2008

Application/Control Number: 10/686,138
Art Unit: 3773

Page 8

/(Jackie) Tan-Uyen T. Ho/
Supervisory Patent Examiner, Art Unit 3773